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IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant:	Aoki et al.
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Group Art Unit:	3714
Examiner:	Kesha Frisby
Confirmation No.:	2304
Title:	**INTERACTIVE DRIVING SIMULATOR AND METHODS OF USING SAME**

APPEAL BRIEF

MS Appeal Brief - Patents
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Sir:

This Appeal Brief is filed pursuant to 37 C.F.R. § 41.37 in furtherance of the Notice of Appeal filed in the above-identified application on January 4, 2011 appealing the decision of the primary Examiner in the Office Action dated October 4, 2011.

The fees required under § 41.20(b)(2) are addressed in the accompanying e-filing transmittals.

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CERTIFICATE OF ELECTRONIC TRANSMISSION

I hereby certify that this correspondence is being electronically transmitted to the United States Patent and Trademark Office on March 4, 2011.

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REAL PARTY IN INTEREST

The real party in interest is Honda Motor Co., Ltd., Assignee, a foreign corporation organized under the laws of Japan, and having a place of business located at 1-1 Minami-Aoyama 2-chome, Minato-ku, Tokyo 107-8556 Japan.

RELATED APPEALS AND INTERFERENCES

Applicants (hereinafter, "Appellants") are not aware of any other related appeals or interferences that would affect the Board's decision on the current appeal.

STATUS OF CLAIMS

Claims 1-7 and 9-16 are pending, have been rejected, and are the subject of this appeal. Claim 8 was canceled in Appellant's Supplemental Amendment-E-1 Under 37 CFR 1.111, filed 25 August 2009. Of the claims on appeal, claims 1, 7, 11 and 15 are independent. Each of claims 1-7 and 9-16 is reproduced in an Appendix to this Appeal Brief.

STATUS OF AMENDMENTS

Appellant has not submitted any amendment subsequent to the Non-Final Office Action of October 4, 2010. Previously, Appellant's Amendments A, B, C, D, Supplemental E-1 and F have all been entered into the file record by the Examiner, the last of which was Amendment-F, dated June 22, 2010. Accordingly, the Claims Appendix attached hereto reproduces the claims as amended in Appellant's June 22, 2010 paper.

Appellant has not submitted any additional amendment subsequent to the Non-Final Office Action of October 4, 2010.

SUMMARY OF CLAIMED SUBJECT MATTER

The following is a concise explanation of the subject matter defined in each of the claims involved in the appeal, as required by 37 C.F.R. § 41.37(c)(1)(v). In general, the following explanations are not intended to be used to construe the claims. References herein to the specification are intended to be exemplary and not limiting.

Claim 1

An interactive driving simulation apparatus (e.g., 50 in Fig. 1, par. [040]) for teaching a student operator (e.g., 30 in Fig. 1, par. [040]) how to operate a two-wheeled vehicle on a simulated road (e.g., par. [017], Figs. 1, 4, 6 and 10-13), wherein said apparatus allows the student operator to simulate driving a two-wheeled vehicle, wherein said apparatus is operable to display a virtual environment as a screen image (e.g., par. [078], Fig. 6) on a display unit (e.g., 58 in Figs. 1 and 3, pars. [041]-[042]) based on a real-time driving routine (e.g., pars.[075]-[079]) of a simulated vehicle by the student operator, and wherein said apparatus is capable of recording a driving route sequence and replaying the driving route sequence on said display unit after the real-time driving routine is completed (e.g., par. [099], Fig. 9), said driving simulation apparatus comprising:

a selector (e.g., "CPU" 100 in Fig. 3, par. [100]) which automatically selects performance evaluation comments from a stored plurality of comments based on operator input in a simulated driving route sequence, by a driving operation of the student operator in a driving route sequence determined in advance in a running route upon the driving simulation apparatus (e.g., pars. [080]-[081] and Fig. 8),

wherein the display unit comprises a screen (e.g., 139 in Fig. 6, 152 in Fig. 10, 154 in Fig.

11, 160 in Fig. 12 and 162 in Fig. 13, and pars. [065], [094]-[098]) which simultaneously displays:

a simulated operating environment comprising simulated city driving including two-way traffic flow and intersections with side roads (e.g., pars. [078]-[079]), Fig. 6), and

superimposed written text of performance evaluation comments when the driving route sequence is replayed on said display unit (e.g. S7-S9 discussed in pars. [090]-[091] in reference to Fig. 9, and shown in Figs. 11-13),

wherein said performance evaluation comments are determined solely on the basis of input from the student operator (e.g., par. [080]) as interpreted by an electronic controller (e.g., "CPU" 100 in Fig. 3, pars. [078] and [082]),

wherein said performance evaluation comments are provided to aid the student operator in assessing current skills so that the student operator can improve his or her driving skills (e.g., par. [100]-[103]), and

wherein said performance evaluation comments are phrases (e.g., par. [081] and Figs. 8 and 10-13) which aid the student operator in improving his or her driving skills.

Claim 2

An interactive driving simulation apparatus according to claim 1, wherein:

said selector selects only a scene at which an unsafe action was performed by the student operator within the simulated driving route sequence, and matches performance evaluation comments corresponding to said scene at which an unsafe action was performed to the student operator's recorded performance,

and wherein said display screen displays only the scene at which the unsafe action was performed and the performance evaluation comments (e.g., pars. [021] and [100], Fig. 13).

Claim 3

An interactive driving simulation apparatus according to claim 1, further comprising:

a speaker (e.g., 114 in Fig. 3, pars. [059]-[060]) for reading the performance evaluation commentary aloud upon reproduction thereof on said display unit.

Claim 4

An interactive driving simulation apparatus according to claim 1, wherein:

said display unit is operable to pause the replay and to display a still-screen image (e.g. par. [050]), in which the simulated operating environment and the performance evaluation commentary are simultaneously displayed thereon.

Claim 5

An interactive driving simulation apparatus according to claim 1, wherein:

said display unit reproduces a screen image recorded during a real-time simulation at a normal replay speed or temporarily pauses the replay and displays a still-screen image at a selected driving situation obtained from the driving route sequence, and performs fast-feeding replay or skipping replay at scenes other than the selected driving situation (e.g., pars. [088]-[094]).

Claim 6

The driving simulation apparatus of claim 1, wherein the apparatus is operable without requiring input from any person other than the student operator during testing and replay (e.g., par. [104]).

Claim 7

An interactive driving simulation apparatus (e.g., 50 in Fig. 1, par. [040]) for teaching a student operator (e.g., 30 in Fig. 1, par. [040]) how to operate a two-wheeled vehicle on a simulated road (e.g., par [017], Figs. 1, 4, 6 and 10-13) which allows the student operator to simulate driving a two-wheeled vehicle, said driving simulation apparatus comprising:

an electromechanical simulator (e.g., 52 in Figs. 1-2, pars. [040]-[045]) which interacts with the student operator during performance of a driving route sequence to teach the student operator how to operate a two-wheeled vehicle on a simulated road, said electromechanical simulator comprising a support frame (e.g., 64 in Fig. 2, par. [042]), a handlebar (e.g., 62 in Fig. 2, par. [042]) operatively connected to the support frame, a pedal mechanism (e.g., 72 in Figs. 1-2, par. [042]) operatively connected to the support frame, and a plurality of sensors (e.g., 71, 81, 83, 88, 90, 91, 92, 94 and 96 in Figs. 2-3, pars. [054]-[057] and [076]-[078]), for measuring student input and for generating data corresponding to a specific performance by the student operator;

a recorder (e.g., "driving information storage region" 111 in Fig. 3, par. [059]) which records the specific performance data;

a processor (e.g., "CPU" 100 in Fig. 3, pars. [059] and [078]) which compares the specific performance data to a set of base line performance data and which automatically selects performance

evaluation comments from a stored plurality of comments based on the comparison of the specific performance data with the base line performance data without requiring concurrent input from an outside source other than the student operator (e.g., par. [080]), and

a display unit (e.g., 58 in Figs. 1 and 3, pars. [041]-[042] comprising a display screen (e.g., 139 in Fig. 6, 152 in Fig. 10, 154 in Fig. 11, 160 in Fig. 12 and 162 in Fig. 13, and pars. [065] and [094]-[098]) which simultaneously displays:

a simulated operating environment comprising simulated city driving including two-way traffic flow and intersections with side roads(e.g., pars. [078]-[079], Fig. 6), and

superimposed written text of performance evaluation comments when the driving route sequence is replayed on said display unit (e.g., S7-S9 discussed in pars. [090]-[091] in reference to Fig. 9) for a testing situation in which the student operator's responses fail to perform at or above a specified level (e.g., pars. [021] and [100], Fig. 13);

wherein a virtual environment is displayed as a screen image (e.g., par. [078], Fig. 6) on the display unit based on a real-time driving route sequence (e.g., pars. [075]-[079]) of a simulated vehicle by the student operator, and wherein said apparatus is capable of recording a specific performance of a driving routine and replaying the specific performance on said display unit after the real-time driving routine is completed (e.g., pars. [082]-[099], Fig. 9),

wherein said performance evaluation comments are determined solely on the basis of input from the student operator (e.g., par. [080]) as interpreted by an electronic controller (e.g., "CPU" 100 in Fig. 3, pars. [078] and [082]),

wherein said performance evaluation comments are provided to aid the student operator in assessing current skills so that the student operator can improve his or her driving skills (e.g., pars. [100]-[103]), and

wherein said performance evaluation comments are phrases (e.g., par. [081] and Figs. 8 and 10-13) which aid the student operator in improving his or her driving skills.

Claim 9

The driving simulation apparatus of claim 7, wherein selected input devices of the electromechanical simulator are operable to perform a first set of functions during performance of a real-time driving route sequence by a student operator, and wherein the selected input devices are operable to perform a second set of functions which is different from the first set of functions during playback of a recorded performance (e.g., pars. [078] and [082]).

Claim 10

The driving simulation apparatus of claim 7, further comprising a speaker (e.g., 114 in Fig. 3, pars. [059]-[060]) for generating an audible reproduction of the selected performance evaluation comments.

Claim 11

A method of training an operator (e.g., 30 in Fig. 1, par. [040]) to improve driving skills for operating a two-wheeled vehicle using a driving simulator (e.g., par. [017], Figs. 1, 4, 6 and 10-13), comprising the steps of:

a) generating a prerecorded driving simulation course including a plurality of testing situations on a display screen of a driving simulator (e.g., par. [061]-[063], Fig. 4), said driving simulation course comprising simulated city driving including two-way traffic flow and intersections with side roads (e.g., pars. [078]-[079]);

b) recording the operator's real-time responses to a testing situation on a computer memory(e.g., "driving information storage region" 111 in Fig. 3, par. [059]);

c) comparing the operator's responses to prerecorded base line data (e.g., "CPU" 100 in Fig. 3, pars. [059] and [078]); and

d) replaying selected scenes from the simulation course on a display screen (e.g., pars. [082]-[099], Fig. 9) superimposed with selected written text of automatically generated performance evaluation comments from a stored plurality of comments corresponding to the operator's recorded responses (e.g., S7-S9 discussed in pars. [090]-[091] in reference to Fig. 9), for a testing situation in which the operator's responses fail to perform at or above a specified level (e.g., pars. [021] and [100], Fig. 13), wherein said performance evaluation comments are determined solely on the basis of input from the operator as interpreted by an electronic controller (e.g., "CPU" 100 in Fig. 3, pars. [078] and [082]), wherein said performance evaluation comments are provided to aid the operator in assessing current skills so that the student operator can improve his or her driving skills (e.g., pars. [100]-[103]), and wherein said performance evaluation comments are phrases which aid the operator in improving his or her driving skills (e.g., par. [081], Figs. 8 and 10-13).

Claim 12

The method of claim 11, wherein the method is performable without requiring input from any person other than the student operator during testing and replay (e.g., par. [104]).

Claim 13

The method of claim 11, further comprising a step of generating an audible performance evaluation commentary upon visual reproduction thereof on said display unit (e.g., [059]-[060]).

Claim 14

The method of claim 11, wherein the replay is paused to display a still-screen image when the simulated operating environment and the performance evaluation commentary are simultaneously displayed thereon (e.g., par. [050]).

Claim 15

An interactive driving simulation apparatus (e.g., 50 in Fig. 1, par. [040]) for teaching a student operator (e.g., 30 in Fig. 1, par. [040]) how to operate a two-wheeled vehicle on a simulated road (e.g., par. [017], Figs. 1, 4, 6 and 10-13) which allows the student operator to simulate driving a two-wheeled vehicle, wherein

said apparatus is operable to display a virtual environment as a screen image (e.g., par. [078], Fig. 6) on a display unit (e.g., 58 in Figs. 1 and 3, pars. [041]-[042]), based on a real-time performance of a driving operation of a simulated vehicle by the student operator (e.g., pars.[075]-[079]), and

wherein said apparatus records a driving route sequence and replays the driving route sequence on said display unit after the real-time performance of a driving operation is completed (e.g., pars. [082]-[099], Fig. 9),

said driving simulation apparatus comprising:

an electromechanical simulator (e.g., 52 in Figs. 1-2, pars. [040]-[045]) with which the student operator interacts during the real-time performance of a driving operation, the electromechanical simulator including input devices ("handle bar mechanism" 62, "step mechanism" 72 in Fig. 2, pars. [042]-[047]) actuated by the student operator during the real-time performance of a driving operation,

a selector (e.g., "CPU" 100 in Fig. 3, par. [100]) which automatically selects performance evaluation comments from a stored plurality of comments based on operator input in a simulated driving route sequence, by a driving operation of the student operator in a driving route sequence determined in advance in a running route upon the driving simulation apparatus (e.g., pars. [080]-[081] and Fig. 8), without requiring concurrent input from an outside source other than the student operator (e.g., par. [104]), and

wherein the display unit comprises a screen (e.g., 139 in Fig. 6, 152 in Fig. 10, 154 in Fig. 11, 160 in Fig. 12 and 162 in Fig. 13, and pars. [065], [094]-[098]) which simultaneously displays both a simulated operating environment (e.g., pars. [078]-[079], Fig. 6) and superimposed written text of performance evaluation comments to the student operator when the driving route sequence is replayed on said display unit(e.g. S7-S9 discussed in pars. [090]-[091] in reference to Fig. 9, and shown in Figs. 11-13), said simulated operating environment comprising simulated city driving including two-way traffic flow and intersections with side roads (e.g., pars. [078]-[079]), Fig. 6),

wherein selected input devices of the input devices of the electromechanical simulator are operable to perform a first set of functions during performance of a real-time driving route sequence by a student operator, and wherein the selected input devices are operable to perform a second set of functions which is different from the first set of functions during playback of a recorded performance (e.g., pars. [078] and [082]),

wherein said performance evaluation comments are provided to aid the student operator in assessing current skills so that the student operator can improve his or her driving skills(e.g., par. [100]-[103]), and

wherein said performance evaluation comments are phrases (e.g., par. [081] and Figs. 8 and 10-13) which aid the student operator in improving his or her driving skills.

Claim 16

The interactive driving simulation apparatus of claim 15,

wherein the interactive driving simulator apparatus further comprises a pre-stored selection of performance evaluation comments (e.g., par. [080], Fig. 8), and

wherein the selector (e.g., "CPU" 100 in Fig. 3, par. [100]) selects an appropriate one of the performance evaluation comments from the pre-stored plurality of performance evaluation comments based on the student operators performance during the driving route sequence (e.g., par. [080]).

GROUNDS OF REJECTION TO BE REVIEWED ON APPEAL

1. Appellant requests reconsideration and withdrawal of the Examiner's rejection of claims 1-3 and 6 as unpatentable under 35 U.S.C. § 103(a) in light of the teachings of Busse et al., U.S. Pat. Publication 2003/0216161 ("Busse"), in view of Aoki JP 2002-297017 ("Aoki '017"), Walker et al. US Pat. Publication 2003/0033161 ("Walker"), and Brink et al., U.S. Pat. Publication 2003/0173743 ("Brink"), as set forth on page 2 of the Non-Final Office Action of October 4, 2010.

2. Appellant requests reconsideration and withdrawal of the Examiner's rejection of claims 4 and 5 as unpatentable under 35 USC §103(a) in light of the teachings of Busse/Aoki/Walker and further in view of Scott et al., U.S. Pat. Publication 2004/0009812 ("Scott"), as set forth on page 6 of the Non-Final Office Action of October 4, 2010.

Appellant requests reconsideration and withdrawal of the Examiner's rejection of claims 7, 9 and 10 as unpatentable under 35 USC §103(a) in light of the teachings of Busse, Aoki et al., U.S. Patent 5,415,550 ("Aoki '550"), Walker, Brink and Aoki '017, as set forth on page 7 of the Non-Final Office Action of October 4, 2010.

3. Appellant requests reconsideration and withdrawal of the Examiner's rejection of claims 11-13 as unpatentable under 35 USC §103(a) in light of the teachings of Busse in view of Huston et al., US Patent 6,146,143 ("Huston") and Walker, as set forth on page 13 of the Non-Final Office Action of October 4, 2010.

4. Appellant requests reconsideration and withdrawal of the Examiner's rejection of claim 14 as unpatentable under 35 USC §103(a) in light of the teachings of Busse, Huston, Walker and further in view of Scott, as set forth on page 16 of the Non-Final Office Action of October 4, 2010.

5. Appellant requests reconsideration and withdrawal of the Examiner's rejection of claims 15 and 16 as unpatentable under 35 USC §103(a) in light of the teachings of Busse, Aoki '017, Aoki '550, Walker and Brink, as set forth on page 16 of the Non-Final Office Action of October 4, 2010.

ARGUMENT

1. The Examiner's rejection of claims 1-3 and 6 as unpatentable under 35 U.S.C. 103(a) in light of Busse, Aoki '017, Walker and Brink should be reversed, as the combined references fail to teach, suggest or render obvious Appellant's claims consider as a whole; because such rejection is based exclusively on the Examiner's use of impermissible hindsight, rather than from any specific teaching of the prior art; and because the applied references of Walker and Brink are non-analogous art to the present invention.

In order to determine obviousness as a legal matter, four factual inquiries must be made concerning: 1) the scope and content of the prior art; 2) the level of ordinary skill in the art; 3) the differences between the claimed invention and the prior art; and 4) secondary considerations of nonobviousness, which in case law is often said to include commercial success, long-felt but unresolved need, failure of others, copying, and unexpected results. ***Graham v. John Deere Co***., 383 U.S. 1, 17-18, 148 USPQ 459, 467 (1966); ***Miles Labs., Inc. v. Shandon, Inc***., 997 F.2d 870, 877, 27 USPQ2d 1123, 1128 (Fed. Cir. 1993).

Applicant respectfully suggests that the Examiner must provide a convincing reason why he or she feels that it would be obvious to combine the elements of the cited references in the fashion presented in the Office Action. "Rejections on obviousness grounds cannot be sustained by mere conclusory statements; instead, there must be some articulated reasoning with some rational underpinning to support the legal conclusion of obviousness." (*In re Kahn*, 441 F. 3d 977, 988 (CA Fed. 2006) cited with approval in ***KSR v. Teleflex,*** *supra*). Indeed,

The U.S. Supreme Court has also stated that a factfinder should be aware of the distortion caused by hindsight bias and must be cautious of arguments reliant upon ex post reasoning. See ***Graham***, 383 U. S., at 36 (warning against a "temptation to read into the prior art the teachings of the

invention in issue" and instructing courts and other fact finders to "guard against slipping into the use of hindsight"). ***KSR v. Teleflex***, *supra*.

MPEP 2143.01 requires that a proposed modification cannot render a referenced invention unsatisfactory for its intended use. If the proposed modification would render the reference's invention unsatisfactory for its intended purpose, then there is no suggestion or motivation to make the proposed modification. ***In re Gordon***, 733 F2d 900, USPQ 1125 (CAFC; 1984). Moreover, if the proposed modification or combination of the prior art would change the principle of operation of the prior art invention being modified, then such modification would be improper, and the combined teachings of the references are not sufficient to render the claims prima facie obvious.

Where a suggested combination of references would require a substantial reconstruction and redesign of the elements shown in [the primary reference] as well as a change in the basic principle under which the [primary reference] construction was designed to operate, then such combination is improper. ***In re Ratti***, 270 F.2d 810, 813, 123 USPQ 349, 352 (CCPA 1959).

Although related to anticipation, the Court of Appeals for the Federal Circuit insightfully stated in the case of ***Motorola, Inc. v. Interdigital Technology Corp***., 121 F. 3d 1461 (Fed. Cir. 1997) that:

> **"For a prior art reference to anticipate a claim, the reference must disclose each and every element of the claim with sufficient clarity to prove its existence in the prior art (citation omitted). 'The (prior art) reference must describe the applicant's claimed invention sufficiently to have placed a person of ordinary skill in the field of the invention in possession of it' (citations omitted). Although this disclosure requirement presupposes the knowledge of one skilled in the art of the claimed invention, that presumed knowledge does not grant a license to read into the prior art reference teachings that are not there."**

Appellant respectfully points out that a similar analysis to what the ***Motorola*** court is talking about in the above quote applies to an obviousness analysis under 35 USC 103. Moreover, Appellant

suggests that in the present application, the Examiner is impermissibly reading into the prior art teachings that are not there.

The Standard for Identifying Analogous Art

Those in a position to evaluate patentability should not consider references that are "too remote to be treated as prior art." ***In re Clay***, 966 F.2d 656, 658 (Fed. Cir.1992) (quoting ***Panduit v. Dennison***, 810 F.2d 1561, 1568 n. 9 (Fed. Cir. 1987), *cert. denied*, 481 U.S. 1052, 107 S.Ct. 2187, 95 L.Ed.2d 843 (1987)). Courts consider two factors in determining whether prior art is analogous: "(1) whether the art is from the same field of endeavor, regardless of the problem addressed, and (2) if the reference is not within the field of the inventor's endeavor, whether the reference still is reasonably pertinent to the particular problem with which the inventor is involved." ***In re Clay***, 966 F.2d at 658-59; ***In re Bigio***, 381 F.3d 1320; 72 USPQ 2D 1209 (CAFC 2004).

Busse fails to disclose *a selector which automatically selects performance evaluation comments based on operator input in a simulated driving route sequence*. Further still, the deficiencies of the Busse reference are not overcome or rectified by any of the other applied references when considered singly or in combination thereof and Walker and Brink are non-analogous art and cannot reasonably be relied upon by the Examiner to initiate, sustain and maintain the obviousness rejection.

Applicant respectfully notes that Busse discloses a video race car simulation game that provides the user the option of simulating a full or partial simulation of a given race or entire season which according to Busse allows the user to enjoy the gaming experience more while removing the tedium previously associated with game options that slow down the game (yellow flags, etc.). The simulator model of Busse further simulates events that may happen during a race and complies

statistics that can be used later. Such performance related statistics may then be displayed to the user of the simulator. For instance, if a player decides to terminate a race before it is actually finished, the simulation module can make a determination of the outcome of the race using already compiled statistics and the performance of the individual cars in the race up to that point [0007]. The simulation module also allows the user to simulate the next race within a series without entering the actual race and the race is simulated based on collected information about the vehicles in the race and their attributes to produce appropriate simulation data (Busse, para. [0008]).

The simulator of Busse, which displays performance statistics, is significantly different than the claimed invention, which automatically selects and displays performance evaluation comments. The Examiner's assertion that the performance statistics of Busse are the same as the performance evaluation comments of the claimed invention is unfounded based on the actual teachings contained within Busse. The system of Busse simply displays simulated gauges which display actual readings taken from various sensors within the simulator. Thus there is no automatic selection required with such a visual display. Further, Busse also discloses that options for the player to choose from that are displayed for the player at set intervals or at set times during the simulated race. These selectable queries, just as the performance statistics displayed to the player, are not equivalent to the performance evaluation comments of the present invention. Thus, Busse discloses numerical statistics that are compiled by the simulation mode to simulate full or partial game play. Distinct from this, the performance evaluation comments of the present invention are constructive comments that come in the form of a phrase that aid the operator in improving his/her driving skills.

Relative to the Examiner's repeated assertions throughout the Office Action that in her view, Busse discloses a selector which automatically selects performance evaluation comments based on

operator input in a simulated driving route sequence, applicant respectfully suggests traverses such characterization of Busse, and submits that such assertion by the Examiner is *not justified* based on the actual teachings of Busse. The Examiner merely states that the performance statistics are store in a memory 52 and are used in making a determination of the outcome of the game and further that (inherently) the information must be stored somewhere in order for it to be displayed. While it may be true that the performance statistics are first stored before they are displayed this is not the same as the claimed invention. Again, the system of Busse simply displays simulated gauges which display actual readings taken from various sensors within the simulator. Thus there is no automatic selection required with such a visual display. Further, Busse also discloses that options for the player to choose from that are displayed for the player at set intervals or at set times during the simulated race. These selectable queries, just as the performance statistics displayed to the player, are not equivalent to the performance evaluation comments of the present invention. Thus, Busse discloses numerical statistics that are compiled by the simulation mode to simulate full or partial game play. Distinct from this, the performance evaluation comments of the present invention are constructive comments that come in the form of a phrase that aid the operator in improving his/her driving skills.

For example, Busse discloses at paragraph [0040] that when a race is initiated or continued after a cautionary (yellow flag) period a "Pit Under Caution?" pop-up or other selectable option is displayed and the *player's remaining fuel, tires, and damage meters are shown*. In this regard, we note that *Busse merely discloses options for the player to choose* from that are automatically displayed for the player, and along with the options, relative statistics are also displayed. These selectable queries and associated statistics displayed to the player are *not equivalent to the performance evaluation comments* of the present invention. The alleged performance evaluation

comments provided by Busse are merely a compilation of performance *related statistics* compiled by the simulation mode (e.g. lap time, total time, position relative to other drivers, aggressiveness of driver, wear of vehicle, tires, etc.).

Additionally, Busse discloses an automatic "simulated" operation that is performed by his system in the instance where the player does not complete a race or does not enter the next race in a series of races during a season. We note that although, these simulated race standings are automatically determined by the simulation module based on the operator input (past race statistics), these race standings and finishing spots are not analogous to the performance evaluation comments as presently disclosed.

Moreover, Busse is fundamentally distinct from the present invention. Firstly, as discussed above, Busse discloses numerical statistics (alleged by the Examiner to disclose the performance evaluation comments of the present invention) that are compiled by the simulation mode to simulate full or partial game play. Distinct from any teaching of Busse, the performance evaluation comments of the present invention are *constructive comments* that aid the operator in assessing current skills so that the operator can constructively improve his or her driving skills. Additionally, Busse is directed to a video game system used primarily for entertainment.

As regards Aoki '017, a simulation apparatus in taught which incorporates a *separate monitoring device* (display unit) *for use by an instructor*. This is directly contrary to the claimed invention, which provides a simulated system that *does not require the input of an outside source* (such as a separate monitoring device or instructor).

Aoki '017 discloses a motorcycle riding simulation system directed to providing improved front and rear images for accurate simulation of motorcycle riding conditions. The system may be used for training/instruction of vehicle operators in cooperation with an instructor, and includes a

running mode selector, which permits the instructor to designate a running mode (ie, ordinary road mode, traffic confusion mode, dangerous condition mode, etc.) (col. 8, line 66 -col. 9, line 12). Generated video output is recorded by a video image signal recording apparatus 32, and after simulation completion, problems of the riding method can be verbally explained by the instructor to the rider while showing the reproduced picture image (col. 11, line 65 - col. 12, line 3; col. 20, line 44-50).

Moreover, Aoki does not disclose superimposing text or images comprising performance evaluation comments on the video image of the recording of the corresponding action by the rider during a simulated operation. Instead, Aoki discloses that while the video image is replayed, the instructor may provide instructive commentary to the rider (col. 20, lines 44-50), whereby the comments are spoken by the instructor and not displayed or audibly produced by the system.

Aoki discloses the display 408 as showing only the forward view image of scenery viewed by the rider/operator. Although Aoki discloses providing a television display 30 for the instructor, and although the display 30 includes plural areas (TV, 35, 37, 38) in which different outputs from the video signal composer 26 are displayed simultaneously, the display 30 is disclosed as provided for (used by) the instructor, the image viewed by the rider consists only of the replay of the simulation as displayed on the flat screen display 408 via video projector 402, and Aoki does not disclose displaying performance evaluation comments on any portion of the display 30. Simultaneous *display* of the simulated operating environment and performance evaluation comments are not disclosed by Aoki. Hence, Aoki '071 is evidence of the non-obviousness of the claimed invention. To combine a system such as Busse intended for entertainment with an instructional system such as disclosed by Aoki or even consider it analogous to the present invention is not obvious.

Relative to Walker, applicant respectfully suggests that Walker is *non-analogous art* to the present invention because Walker discloses and is related to a method and apparatus for obtaining,

filtering, storing, arranging, displaying, selling and/or providing access to information relating to a primary document (newspaper article), but which may only be referenced or partially included in the primary document [0003]. Walker's stated objective is to provide a method and apparatus that capitalizes on interviews conducted by newspaper reporters by providing a more thorough and complete interview based on a majority of the interview instead of the bits of information that is currently used such that the more thorough interview provides more supplemental information that is interesting to the readers [0005]-[0007]. Walker proposes a method and apparatus (system) that generates a modified transcript of an interview without creating new time commitments or responsibilities for a journalist or an editor [0008].

Therefore, given the nature of the modified transcript of Walker, persons skilled in the art would recognize that: 1) it does not pertain to the field of endeavor of interactive driving simulation apparatus; and 2) Walker does not address a problem similar to those addressed and overcome by the claimed invention. Hence, persons skilled in the art would recognize that Walker's modified transcript is not analogous to the presently claimed invention, and persons skilled in the art would not have looked to Walker even if such persons were considering possible modifications to Aoki's and Busse's disclosed systems.

Regarding Brink, applicant respectfully suggests that the Brink reference teaches away from the present invention, thus providing prima facie evidence of non-obviousness and also provides another example of non-analogous art, in a manner similar to Walker. For example, we note that Brink discloses that in his *livestock judging game*, the players are able to view archived results (placing, etc.) compiled in a database. The scoring, placing and reasons for the results of the particular livestock are entered by an official judge and subsequently archived. Thus, Brink fails to disclose a system that *operates without requiring any input from the instructor or outside source (official judge), other than the operator being tested.* In Brink, as stated above, an outside source (the

official judge) provides the comments/reasoning for the placement of the livestock and this is later accessible by the user. Additionally, Brink discloses the use of livestock images that the judges use to rank the livestock, Brink can hardly be considered analogous to an interactive driving simulation system.

Further, Brink is *non-analogous art* to the present invention, because Brink discloses and relates to a method of conducting competitive livestock (animal) judging games by utilizing a plurality of communication media, e.g. Internet, etc. [0001]. Brink's stated object is to provide a *livestock judging game via the Internet*, to incorporate the use of a database that stores and archives the various comments, placing, etc., of the livestock which can later be accessed by a player and allowing players to read and hear the official judge's animal placement reasons by allowing players to access a pre-recorded audio clip of the judge' comments [0013].

Brink alleges that his livestock judging game overcomes the problems with the cited background art by providing the capabilities stated above. Therefore, given the nature of the livestock judging game of Brink, persons skilled in the art would recognize that: 1) it does not pertain to the field of endeavor of interactive driving simulation apparatus; and 2) Brink does not address a problem similar to those addressed and overcome by the claimed invention. Hence, persons skilled in the art would recognize that Brink's livestock judging game is not analogous to the presently claimed invention, and persons skilled in the art would not have (in the first instance) looked to Brink even if such persons were considering modifications to Aoki's and Busse's disclosed systems.

As such, appellant respectfully disagrees with the Examiner's rejection of claims 1-3 and 6 because it is based exclusively on the Examiner's use of impermissible hindsight, rather than from any specific teaching of the prior art. Further, as stated in previous amendments and contrary to the Examiner's arguments, Busse fails to disclose a selector which automatically selects performance evaluation comments based on operator input in a simulated driving route sequence. Further still, the

deficiencies of the Busse reference are not taught by or even suggested by any of the applied references when considered singly or in combination thereof. Thus, appellant respectfully requests that such rejection be reversed.

2. The Examiner's rejection of claims 4 and 5 as unpatentable under 35 U.S.C. 103(a) in light of Busse, Aoki '017, Walker and further in view of Scott should be reversed, as the combined references fail to teach, suggest or render obvious Appellant's claims consider as a whole; because such rejection is based exclusively on the Examiner's use of impermissible hindsight, rather than from any specific teaching of the prior art; and because the applied references of Walker and Scott are non-analogous art to the present invention.

The Appellant disagrees with the rejection of claims 4 and 5 for the reasons presented above with respect to claim 1, from which claims 4 and 5 depend, which are not overcome by any additional teachings of Scott. Particularly, Applicant notes that neither Busse, Aoki '017, Walker or Scott disclose displaying performance evaluation comments, either audio or visual, wherein the performance evaluation comments are not determined based on any outside input.

Applicant respectfully disagrees that it would be obvious for one skilled in the art to combine the teachings of Scott et al. with the disclosures of (Busse/Aoki '017/Walker). Applicant respectfully submits that the Scott et al. reference is not analogous art. Scott et al. discloses a system where live video feeds of horse racing can be replayed at the command of a user.

Applicant submits that a reference is not reasonably pertinent to a problem with which the inventor was concerned if a person having ordinary skill in the art would not reasonably be expected or motivated to look at that art. ***In re Oetiker***, 977 F.2d 1443, 24 USPQ2d 1443 (Fed. Cir. 1992). With regard to Applicant's invention, Applicant respectfully submits that it would not be reasonable to expect a person with ordinary skill to seek out the teachings disclosed in Scott et al. to attempt to solve the problem of playback of a simulated driver training exercise, where Scott et al. discloses a

method for replaying video of recorded horse racing. Therefore, it would not be proper to combine the teachings of (Busse/Aoki '017/Walker) with non-analogous art such as Scott et al. However, even if the combination would be proper, the combination does not make Applicant's invention obvious, for those reasons as stated above with respect to claim 1, from which claims 4 and 5 depend.

As such, appellant respectfully disagrees with the Examiner's rejection of claims 4 and 5 because it is based exclusively on the Examiner's use of impermissible hindsight, rather than from any specific teaching of the prior art. Further still, the deficiencies of the Busse reference are not taught by or even suggested by any of the applied references when considered singly or in combination thereof. Thus, appellant respectfully requests that such rejection be reversed.

3. The Examiner's rejection of claims 7, 9 and 10 as unpatentable under 35 U.S.C. 103(a) in light of Busse, Aoki '550, Walker, Brink and Aoki '017 should be reversed, as the combined references fail to teach, suggest or render obvious Appellant's claims consider as a whole; because such rejection is based exclusively on the Examiner's use of impermissible hindsight, rather than from any specific teaching of the prior art; and because the applied references of Walker and Brink are non-analogous art to the present invention.

The Appellant disagrees with the Examiner's rejection of claims 7, 9 and 10 for the substantially the same reasons stated in relation to claims 1-3 and 6 above. Moreover, appellant submits that the deficiencies of Walker, Brink, Busse, Aoki '071 are not overcome by any additional teachings of Aoki (US '550) cited by the Examiner. Specifically, none of the above references, when considered singly or in combination thereof, discloses the simultaneous display of simulated operating environment and *performance evaluation comments*, either audio or visual, which do not require any input from an outside source other than the operator being tested.

Regarding Aoki '550, applicant continues to maintain and assert its position as previously detailed in Amendments B and C, where it is noted that that Aoki '550 does not disclose a system of

automatically selecting performance evaluation comments based on performance in relation to a specific performance criteria as claimed by Applicants invention, claim 7. Rather, Aoki '550 discloses a system wherein the operator's responses are graded and an evaluation is made SA13. Also, Aoki '550 discloses recording the entire riding simulation (col. 20, lines 46-50).

As such, appellant respectfully disagrees with the Examiner's rejection of claims 7, 9 and 10 because it is based exclusively on the Examiner's use of impermissible hindsight, rather than from any specific teaching of the prior art. Further still, the deficiencies of the Busse reference are not taught by or even suggested by any of the applied references when considered singly or in combination thereof. Thus, appellant respectfully requests that such rejection be reversed.

4. The Examiner's rejection of claims 11-13 as unpatentable under 35 U.S.C. 103(a) in light of Busse, Huston and Walker, Brink and Aoki '017 should be reversed, as the combined references fail to teach, suggest or render obvious Appellant's claims consider as a whole; because such rejection is based exclusively on the Examiner's use of impermissible hindsight, rather than from any specific teaching of the prior art; and because the applied references of Walker is non-analogous art to the present invention.

Appellant disagrees with the Examiner's rejection of claims 11-13 for the reasons presented above with respect to claim 7, as it contains substantially the same limitation as recited in step c) of claim 11. Additionally, appellant disagrees with the rejection of claim 11-13 for the reasons presented above with respect to claim 1, as it contains substantially the same limitation as recited in step d) of claim 11. Specifically, appellant respectfully submits that none of the above references, either singly or in combination, disclose the simultaneous display of simulated operating environment and performance evaluation comments, either audio or visual, which do not require any input from an outside source other than the operator being tested.

Upon review of Huston, the applicant finds that Huston discloses a vehicle simulation system in which a first user (student) participates in the simulation by operating vehicle control devices 8 in a driving station 2 in response to a sequence of visual images, and in which a second user (instructor) defines one or more traffic events and presents the traffic events during a simulation session to the first user (col. 5, lines 52-67). Huston discloses that the system allows the first user to view his performance during a simulation. Specifically, software presents statistical information pertaining the recently completed simulation session. The statistics may be presented graphically on the monitor 31, and include data such as elapsed time, speed limit conformance, etc. (col. 8, lines 23-37). In addition, Huston discloses that the system allows the second user, such as a driving instructor, to revisit portions of the simulation session either during the course of the simulation or afterward. That is, the second user is permitted to selectively stop and freeze, or replay, the displayed image on the video means 6 so that the second user/instructor may discuss a driving situation with the first user (col. 8, lines 38-56).

This is significantly different than the claimed invention, wherein the performance evaluation comments are generated by the system without the input from any outside source, such as an instructor or the like.

For the reasons put forth above, appellant disagrees that the limitations of claims 11-13 are made obvious by the combination of Busse, Huston and Walker. Thus, appellant respectfully requests that such rejection be reversed.

5. The Examiner's rejection of claim 14 as unpatentable under 35 U.S.C. 103(a) in light of Busse, Huston, Walker and further in view of Scott should be reversed, as the combined references fail to teach, suggest or render obvious Appellant's claims consider as a whole; because such rejection is based exclusively on the Examiner's use of impermissible hindsight,

rather than from any specific teaching of the prior art; and because the applied references of Walker and Scott are non-analogous art to the present invention.

Appellant disagrees with the Examiner rejection of claim 14 over the applied references for those reasons as stated above in relation to claim 11, from which claim 14 depends, which are not overcome by any additional teachings of Scott, which is discussed above with respect to the rejection of claims 4 and 5.

For the reasons put forth above, appellant disagrees that the limitations of claims 11-13 are made obvious by the combination of Busse, Huston, Walker and Scott. Thus, appellant respectfully requests that such rejection be reversed.

6. The Examiner's rejection of claims 15 and 16 as unpatentable under 35 U.S.C. 103(a) in light of Busse, Aoki '017, Aoki '550, Walker and Brink should be reversed, as the combined references fail to teach, suggest or render obvious Appellant's claims consider as a whole; because such rejection is based exclusively on the Examiner's use of impermissible hindsight, rather than from any specific teaching of the prior art; and because the applied references of Walker and Brink are non-analogous art to the present invention.

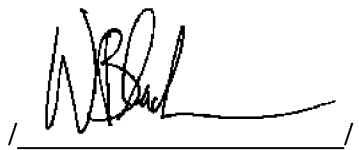
Appellant disagrees with the Examiner rejection of claims 15 and 16 over the applied references for those reasons as stated above in relation to claims 1, 6, 7 and 9, as each of the limitations of claims 15 are substantially included in one of such claims.

For the reasons put forth above, appellant disagrees that the limitations of claims 15 and are made obvious by the combination of Busse, Aoki '017, Aoki '550, Walker and Brink. Thus, appellant respectfully requests that such rejection be reversed.

CONCLUSION

In view of the above analysis, Appellant respectfully requests reconsideration and reversal, by this Honorable Board, of all rejections of record, and further requests allowance of each of the pending claims.

Respectfully submitted,



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APPENDIX A – CLAIMS APPENDIX

1. (Previously Presented) An interactive driving simulation apparatus for teaching a student operator how to operate a two-wheeled vehicle on a simulated road, wherein said apparatus allows the student operator to simulate driving a two-wheeled vehicle, wherein said apparatus is operable to display a virtual environment as a screen image on a display unit based on a real-time driving routine of a simulated vehicle by the student operator, and wherein said apparatus is capable of recording a driving route sequence and replaying the driving route sequence on said display unit after the real-time driving routine is completed, said driving simulation apparatus comprising:

a selector which automatically selects performance evaluation comments from a stored plurality of comments based on operator input in a simulated driving route sequence, by a driving operation of the student operator in a driving route sequence determined in advance in a running route upon the driving simulation apparatus,

wherein the display unit comprises a screen which simultaneously displays:

a simulated operating environment comprising simulated city driving including two-way traffic flow and intersections with side roads, and

superimposed written text of performance evaluation comments when the driving route sequence is replayed on said display unit,

wherein said performance evaluation comments are determined solely on the basis of input from the student operator as interpreted by an electronic controller,

wherein said performance evaluation comments are provided to aid the student operator in assessing current skills so that the student operator can improve his or her driving skills, and

wherein said performance evaluation comments are phrases which aid the student operator in

improving his or her driving skills.

2. (Previously Presented) An interactive driving simulation apparatus according to claim 1, wherein:

said selector selects only a scene at which an unsafe action was performed by the student operator within the simulated driving route sequence, and matches performance evaluation comments corresponding to said scene at which an unsafe action was performed to the student operator's recorded performance,

and wherein said display screen displays only the scene at which the unsafe action was performed and the performance evaluation comments.

3. (Original) An interactive driving simulation apparatus according to claim 1, further comprising:

a speaker for reading the performance evaluation commentary aloud upon reproduction thereof on said display unit.

4. (Original) An interactive driving simulation apparatus according to claim 1, wherein:

said display unit is operable to pause the replay and to display a still-screen image, in which the simulated operating environment and the performance evaluation commentary are simultaneously displayed thereon.

5. (Previously Presented) An interactive driving simulation apparatus according to claim 1, wherein:

said display unit reproduces a screen image recorded during a real-time simulation at a normal

replay speed or temporarily pauses the replay and displays a still-screen image at a selected driving situation obtained from the driving route sequence, and performs fast-feeding replay or skipping replay at scenes other than the selected driving situation.

6. (Original) The driving simulation apparatus of claim 1, wherein the apparatus is operable without requiring input from any person other than the student operator during testing and replay.

7. (Previously Presented) An interactive driving simulation apparatus for teaching a student operator how to operate a two-wheeled vehicle on a simulated road which allows the student operator to simulate driving a two-wheeled vehicle, said driving simulation apparatus comprising:

an electromechanical simulator which interacts with the student operator during performance of a driving route sequence to teach the student operator how to operate a two-wheeled vehicle on a simulated road, said electromechanical simulator comprising a support frame, a handlebar operatively connected to the support frame, a pedal mechanism operatively connected to the support frame, and a plurality of sensors for measuring student input and for generating data corresponding to a specific performance by the student operator;

a recorder which records the specific performance data;

a processor which compares the specific performance data to a set of base line performance data and which automatically selects performance evaluation comments from a stored plurality of comments based on the comparison of the specific performance data with the base line performance data without requiring concurrent input from an outside source other than the student operator, and

a display unit comprising a display screen which simultaneously displays:

a simulated operating environment comprising simulated city driving including two-way traffic flow and intersections with side roads, and

superimposed written text of performance evaluation comments when the driving route sequence is replayed on said display unit for a testing situation in which the student operator's responses fail to perform at or above a specified level;

wherein a virtual environment is displayed as a screen image on the display unit based on a real-time driving route sequence of a simulated vehicle by the student operator, and wherein said apparatus is capable of recording a specific performance of a driving routine and replaying the specific performance on said display unit after the real-time driving routine is completed,

wherein said performance evaluation comments are determined solely on the basis of input from the student operator as interpreted by an electronic controller,

wherein said performance evaluation comments are provided to aid the student operator in assessing current skills so that the student operator can improve his or her driving skills, and

wherein said performance evaluation comments are phrases which aid the student operator in improving his or her driving skills.

8. (Canceled)

9. (Previously presented) The driving simulation apparatus of claim 7, wherein selected input devices of the electromechanical simulator are operable to perform a first set of functions during performance of a real-time driving route sequence by a student operator, and wherein the selected input devices are operable to perform a second set of functions which is different from the first set of

functions during playback of a recorded performance.

10. (Original) The driving simulation apparatus of claim 7, further comprising a speaker for generating an audible reproduction of the selected performance evaluation comments.

11. (Previously Presented) A method of training an operator to improve driving skills for operating a two-wheeled vehicle using a driving simulator, comprising the steps of:

a) generating a prerecorded driving simulation course including a plurality of testing situations on a display screen of a driving simulator, said driving simulation course comprising simulated city driving including two-way traffic flow and intersections with side roads;

b) recording the operator's real-time responses to a testing situation on a computer memory;

c) comparing the operator's responses to prerecorded base line data; and

d) replaying selected scenes from the simulation course on a display screen superimposed with selected written text of automatically generated performance evaluation comments from a stored plurality of comments corresponding to the operator's recorded responses, for a testing situation in which the operator's responses fail to perform at or above a specified level, wherein said performance evaluation comments are determined solely on the basis of input from the operator as interpreted by an electronic controller, wherein said performance evaluation comments are provided to aid the operator in assessing current skills so that the student operator can improve his or her driving skills, and wherein said performance evaluation comments are phrases which aid the operator in improving his or her driving skills.

12. (Original) The method of claim 11, wherein the method is performable without requiring input from any person other than the student operator during testing and replay.

13. (Original) The method of claim 11, further comprising a step of generating an audible performance evaluation commentary upon visual reproduction thereof on said display unit.

14. (Original) The method of claim 11, wherein the replay is paused to display a still-screen image when the simulated operating environment and the performance evaluation commentary are simultaneously displayed thereon.

15. (Previously Presented) An interactive driving simulation apparatus for teaching a student operator how to operate a two-wheeled vehicle on a simulated road which allows the student operator to simulate driving a two-wheeled vehicle, wherein

said apparatus is operable to display a virtual environment as a screen image on a display unit, based on a real-time performance of a driving operation of a simulated vehicle by the student operator, and

wherein said apparatus records a driving route sequence and replays the driving route sequence on said display unit after the real-time performance of a driving operation is completed,

said driving simulation apparatus comprising:

an electromechanical simulator with which the student operator interacts during the real-time performance of a driving operation, the electromechanical simulator including input devices actuated by the student operator during the real-time performance of a driving operation,

a selector which automatically selects performance evaluation comments from a stored plurality of comments based on operator input in a simulated driving route sequence, by a driving operation of the student operator in a driving route sequence determined in advance in a running route upon the driving simulation apparatus, without requiring concurrent input from an outside source other than the student operator, and

wherein the display unit comprises a screen which simultaneously displays both a simulated operating environment and superimposed written text of performance evaluation comments to the student operator when the driving route sequence is replayed on said display unit, said simulated operating environment comprising simulated city driving including two-way traffic flow and intersections with side roads,

wherein selected input devices of the input devices of the electromechanical simulator are operable to perform a first set of functions during performance of a real-time driving route sequence by a student operator, and wherein the selected input devices are operable to perform a second set of functions which is different from the first set of functions during playback of a recorded performance,

wherein said performance evaluation comments are provided to aid the student operator in assessing current skills so that the student operator can improve his or her driving skills, and

wherein said performance evaluation comments are phrases which aid the student operator in improving his or her driving skills.

16. (Previously presented) The interactive driving simulation apparatus of claim 15,

wherein the interactive driving simulator apparatus further comprises a pre-stored selection of performance evaluation comments, and

wherein the selector selects an appropriate one of the performance evaluation comments from the pre-stored plurality of performance evaluation comments based on the student operators performance during the driving route sequence.

APPENDIX B – EVIDENCE APPENDIX

None.

APPENDIX C – RELATED PROCEEDINGS APPENDIX

None.